Autoantibody Prevalence in Chronic Hepatitis C Patients in Latvia

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Introduction. Hepatitis C is one of the major health problems. There are 150 million chronic carriers throughout the world. Chronic hepatitis C (CHC) is known to be the disease with pronounced autoimmune component that is caused by various subtypes of hepatitis C virus (HCV). Various geographical regions are characterized by certain autoantibody prevalence in sera of CHC patients. HCV types 2, 3, 4 infections have better prognosis than HCV type 1 related CHC. This study presents the results of autoantibodies detection in CHC patients in Latvia.

The aim. The aim of this research was to study autoantibody prevalence in CHC patients infected with various types of HCV.

Materials and methods. Sera of 33 patients with epidemiological, clinical, serological, biochemical, morphological evidence of HCV infection and duration of hepatitis at least 6 months were examined on presence of autoantibodies before the treatment. Five types of autoantibodies were tested in indirect immunofluorescence on rat tissues: ANA – antinuclear antibody, SMS – smooth muscle antibody, anti-LKM – liver-kidney microsomal antibody, anti-GPC – antibody to gastric parietal cells, AMA – antimitochondrial antibody (The Binding Site Ltd., England). The types of HCV were detected using Murex HCV Serotyping 1–6 Assay.

Results. 39% of patients of CHC had no autoantibodies in sera before treatment, 3% had anti-GPC, 3% – anti-LKM, 9% – ANA, 9% – SMA + anti GPC, 18% – SMA and 18% – SMA + ANA. Prevalence of SMA and ANA in CHC patients was higher than anti-GPC and anti-LKM. Among SMA positive patients, 20% had titer 1 : 40, 40% had titer 1 : 80 and 40% had titer 1 : 160. Anti-LKM positive patient had titer 1 : 640. Frequency of autoantibody presence in sera was higher in patients with HCV type 1 than in HCV types 2–4 infected ones.

Conclusions. According to the results of our study, there was a high prevalence of SMA, average – of ANA and anti-GPC and low – of anti-LKM in CHC patients. Autoantibodies were more frequently found in sera of CHC patients infected by HCV type 1 versus those who were infected by HCV types 2–4. The patients with HCV type 1 could have higher risk of autoimmune component than the patients with HCV types 2, 3, 4.